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ABSTRACT

A multimedia-style computer application is detailed that facilitates students' role playing in a simulated business situation. The incorporation of video footage lends a "face" to a theoretical client with which the student must interact to bring about the successful resolution of a potential "calamity." The process of video creation is discussed, along with the medium's benefits. Applications of the multimedia/video concept to other fields of study are considered. The video segment script and shot sheet, as well as a list of World Wide Web sites for additional multimedia/video information, are provided. (Author/AEF)

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Simulating Professional/Client Interaction: The Benefits of Computer Multimedia and Video

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Abstract

A multimedia-style computer application is detailed that facilitates students' role-playing in a simulated business situation. The incorporation of video footage lends a 'face' to a theoretical client the student is challenged to interact with to bring about the successful conclusion of a potentially calamitous situation. The process of video creation is discussed along with the benefits to those involved. Applications of the multimedia/video concept to other fields of study are considered.

BACKGROUND

Use of computers in an interactive multimedia capacity is noted as a successful means of communicating written and graphic information and allowing user interaction, which is a combination some researchers see as the most effective means of promoting information retention (Monti, Cicchetti, Goodkind & Guanaco, 1994, pp. 66).

Many courses of study within higher education are beginning to explore the merits of computer multimedia. In the field of interior design, for example, multimedia is being used to teach such concepts as the elements and principles of design (Scott, 1993) and computer animation to further client understanding of interior projects (Hosken & Thompson, 1993). Computerized multimedia techniques (implying a computer program with audio input, interactivity with the user and video footage) may prove to be an equally successful learning tool in the area of professional/client interaction, and not only within the field of interior design.

RATIONALE

Students involved in internships are often out of necessity relegated to the completion of rather mundane tasks and hence can be isolated from typical

misunderstandings or difficulties that may arise between the professional and his or her clients or patients. The intern thus may miss a valuable learning opportunity of how to correctly handle common business and ethical situations and may be unprepared for such occurrences after graduation.

Project's Beginning: Role Playing Exercises

Role-playing exercises created in the recent past by the author have benefited interior design students in exposing them to such dilemmas. In these exercises, students are placed into the role of either the client or the interior designer and are presented with a situation that results in an ethical or moral dilemma to the interior designer. The student team is then asked to reach a compromise agreeable to both parties. While these exercises prove to be successful, the natural tendency of the student playing the role of the client is to be timid in their performance of the client's moods and reactions. A more forceful presentation might prove more effective.

PURPOSE

Exposing students to as real a calamitous professional situation as possible in a 'safe' computer environment may better prepare them to deal with real dilemmas when they arise in their fields. Multimedia computerization may provide an even more realistic scenario than a student role-playing format, as the student is now faced with a sometimes intimidating client through video footage which has a face, name and manner that is definitely not a fellow student's. Interactive

multimedia computerization has the potential to bring the student into a 'first person' situation in a developing business dilemma.

PROCEDURE

A multimedia computer program has been developed which presents the student with a reality-based business situation they might encounter in actual interior design practice. The Gold Disk Astound program and Video Spigot video footage incorporation tool are utilized to create the program which is operable on any Windows-based 486 PC or Apple computer with external speakers, a 3" floppy disk drive and an upgraded video card that will accept video footage. It is not necessary for the computer to have the Astound program resident in its memory.

Use of the Program

Class discussion concerning interior design business practices and ethical considerations prefaces the student's exposure to this computer program. Then, working alone at the computer, the student faces the increasingly problematic situation and must interact with the described (and sometimes angry!) client. Thus the student is pressed to make judgments concerning ethics and standard procedures of business as the situation progresses. Throughout the dilemma the student must choose from several choices of action by selecting a described response with the computer mouse. In such a manner the student slowly wends their way through the situation, ultimately reaching one of several possible sets

of conclusions. The implications of their choice are then summarized and the student is directed to explore the outcomes of the other choices they might have made. Thus, the suggested successful outcome to the difficulty is investigated as well as the other less appropriate course of action.

At the program's conclusion, a list of questions is posed that the student answers in written format based on their experiences with the dilemma. These questions form the foundation for post-test discussion in the group classroom setting.

PROJECT DEVELOPMENT

A unique aspect of this multimedia program is found in the collaboration necessary for its creation. The video segments that are central to the multimedia program demand as professional a quality as the multimedia application itself. Thus, early on in project development, a cross-campus relationship evolved between faculty of Interior Design and Mass Communications.

Script Creation

After the author determined that project structure would be appropriate for multimedia/video applications, the Department of Mass Communications was approached to provide guidance and services for the video segments to be used within the finished piece. Through several consultative meetings, continual

reference to the project's master plan and multiple rough script drafts, a film style single camera script was developed.[i]

After the video segments were incorporated into the project's multimedia script, the scripting process was completed to facilitate the video shoot (see attached script sample). Before actual production began and to ensure that no essential material was overlooked in the shooting process, shot sheets were created. These production tools laid out the entire project scene by scene and accompanied the producers on the day of shooting. Thus, as each necessary shot was completed, it was checked off on the list for that particular scene (see attached shot sheet for scene 1).

Bringing It All Together

While the script and shot sheets were being developed other activities were accomplished to ensure success on shooting day. Economical talent was located who could play the role of Mr. Jim Mason, the central character within the computer/video application. After determination that union actors' fees lay beyond the scope of the project's budget, a fellow faculty member volunteered his time and skills to the project. He was briefed on the script and became familiar with his role before taping. A second talent was recruited to play Andrew, a character with a minor, yet crucial role. A television production student volunteered to act the part and accompanied the team on shooting day as both talent and crew member.

Another preproduction necessity was finding a location for the shoot which was available on shooting day and looked like the office of a successful businessman. Fortunately, the producers had the support of the University's administration and the Provost, out of town for the day, offered the use of his office. Additionally, an old tattered conference room was located which would provide footage necessary for inclusion in the finished product. Having secured a location, producers set up a crew composed of advanced Mass Communications television production students. The crew checked out and familiarized themselves with the necessary equipment which included camera, lavalier microphones and lighting instruments to provide scene illumination.

As the day of shooting approached, props needed for the shoot were created or found. A 'dummy' contract was fabricated by the producer, mock 'floor plans' were retrieved, a watch was worn by the actor, and a calendar found its way to the Provost's desk-- all necessary objects that played a part in the script.

With all props gathered, script and shot sheets completed, location confirmed, equipment tested and crew assigned, the day of shooting went smoothly. No shots were overlooked, talent performed well, audio and lighting were satisfactory and all material needed for completion of the final project was gathered successfully.

After shooting day the video material was edited together to complete the different video segments for use within the finished multimedia project. The editing process went well and quality video segments were available for inclusion. The edited material was incorporated and edited into the finished computer application.

PROJECT BENEFITS

The videotaping process offered multiple benefits to different persons involved in the project, students as well as producers. First, this project provided a wonderful opportunity for Mass Communications video production students to become involved in an important, applied production. Within this project students acted as both talent and crew, providing technical support during the videotaping sessions and subsequent post production editing sessions. Experiential learning of this type is exceptionally beneficial to students. In addition, experience of this kind makes students more attractive to potential employers and those granting professional internship opportunities.

Secondly, the project parameters and video segments were fairly simple in production format and style, providing an opportunity for the creation of a project utilizing available equipment at very small costs. These factors made it possible for 'novices' to achieve the satisfaction of having made their first multimedia project incorporating video segments without having a significant amount of money invested in a 'trial'. Mass Communication department equipment was

utilized for no charge and taping was accomplished on S-VHS tapes utilizing standard analog recording processes, resulting in video quality at a near professional level.

Students within the interior design program at Southeast Missouri State University also benefited from this project as it provided interactive, hands-on decision-making opportunities in an applied and experiential manner. While the completed project had some glitches in regard to video quality (to be discussed shortly), this quality concern does not inhibit or impair the learning experience students have had with the project.

The university and faculty also gained from this project by way of the interdepartmental nature of the project. Cross-campus camaraderie resulted and, prompted by the discovery of how well the faculty worked together, their pooled efforts eventually led to the penmanship of a grant to create an educational historic preservation video production.

Without the expertise of Interior Design and Mass Communication faculty this project would have been extremely difficult, if not impossible, to produce. In addition, other faculty are commended for their support through the supplying of talent for the project. Essentially, the expertise, patience, and support of many people in multiple departments and the University's administration made the project's goal attainable.

VIDEO QUALITY ISSUES

As evidenced in the video demonstration of the multimedia project, there are some fairly serious problems with the quality of the video in the finished program. Specifically, the audio component of the video plays back in "real time" (meaning that it plays back at the same speed as originally recorded) and the video plays back in a manner which appeared choppy and slow, in effect lagging behind the audio. Originally the authors thought the problem might have been caused by the fact the video was recorded in an analog format and ultimately played back in digital form via the computer's hard drive. As we have learned since production, while it is ideal to shoot the video in digital format, an analog video signal is generally not problematic with such projects. The greatest concern an original analog format has is the fact that images, when reproduced in digital form, will appear to be somewhat grainy.

When supporting the inclusion of video segments, computer hardware support capable of quick data retrieval is paramount. This multimedia computer application was produced using a 66 Mhz Pentium computer with 16 megabytes of RAM and 540 gigabytes of hard drive space. While the hardware utilized was adequate for this particular application in that the educational value of the project was not impaired, the optimal hardware selection for such a project would be a 100-133 Mhz Pentium processor with 32-64 megabytes of RAM and at least one gigabyte of hard drive space. Such speed and disk space would ensure that

video segments run smoothly and in real time. It is foreseen that the application will be transferred to such a computer for resolution of these problems. The use of more sophisticated multimedia programs, such as Authorware and MacroMedia Director is also currently being investigated.

MULTIMEDIA AND VIDEO: APPLICATIONS TO OTHER FIELDS

This particular application focused on promoting ethical and appropriate decision making in the specific academic area of interior design. The application of such interactive computer programs to other areas of academia leads to a nearly inexhaustible list. Application incorporating video could be utilized within any area which involves the education of students who must learn to think their way through any ethical, legal, creative, social, health care or business issue. This form of interactive program could easily be used in academic settings as varied as the following:

- social work
- nursing
- architecture and interior design
- exercise physiology
- newswriting
- public relations
- marketing and management
- advertising
- journalism
- video production
- radio formatting

While applications of this project type are as varied as the different programs a school may offer, the key, and most crucial, factor in the development of successful productions is the presence of faculty who are willing to learn new

technologies and to experiment as the producers of this project did. University support of hardware purchases necessary for such productions is also an obvious prerequisite, as well as the institution's willingness to invest in the training of their faculty to learn such new teaching methods.

Academicians who are interested in learning more about multimedia and video applications are encouraged to reference our addendum which provides website addresses and a short bibliography.

Select Bibliography

Hosken, T. & Thompson, J. (1993). Computer Animated Versus Still-Frame Presentation Techniques. Proceedings of the Interior Design Educators Council Conference.

Monti, D., Cicchetti, G., Goodkind, T. & Ganci, M. (1994, August).: A New Methodology for Instruction. Technology in Higher Education Journal, 66-68.

Scott, S. (1993). Introduction to Video Image Processing and its Applications in Interior Design Education and Research. Proceedings of the Interior Design Educators Council Conference.

Zettl, H. Television Production Handbook (5th ed.). Belmont, CA: Wadsworth Publishing Co.

Endnotes

[1] Script writing references are available; several different styles are commonly utilized. See bibliography for one such source of information.

VIDEO SEGMENT SCRIPT:
Scene I

Text screen:

Welcome to Client-Interior Designer Computerized Interactive Challenges!!

Text screen:

In a few seconds you will be placed into a situation where you shall play the role of a professional interior designer. It is your responsibility to respond in an ethical way to this situation using sound business procedures. Your livelihood as an interior designer, in fact, depends upon it!

Text screen:

As the situation develops, you shall be asked to make a series of choices that shall guide your destiny in the situation. Choose your response from the available list of choices. If your exact choice is not listed, pick the one closest to your decision. Consider each carefully before you make it!

Text screen:

At the end of the situation you shall learn the consequences of your decisions.

Good luck and choose wisely!

Text screen:

Meet the players in this scenario...

Text screen: with clipart image/designed text of 'you'.

You are a young interior designer establishing your own design practice and are involved in both residential and commercial space planning, design and sales. At this point in time you are eager to create a client base that will not only be pleased with your work but will return to your for future projects. Along with this you recognize the need to establish a good reputation for yourself in not only your design skills but also in your business practices.

Text screen: with scanned image of actor playing client

Your client is an influential area businessman named Jim Mason. He is in his mid-forties and is single. His position as a powerful stockbroker could cause him to be a valuable contact for you and his positive reference very well might lead to other lucrative work in the future. Mr. Mason has earned a reputation as a shrewd man and possesses an expensive taste. The successes he has achieved in past business dealings may in part be due to his keen intuitive and calculating skills.

Text screen: stylized text

The background of your current situation...

Text screen: scanned image of designer and client talking and a house

Mr. Mason has employed your services in the past. Nine months ago he called upon you to renovate a rather large vacation residence in his possession. Mason's expensive tastes dictated that the project was a costly and extravagant undertaking.

Text screen: VHS single image of letter of agreement on a desk

Before the project commenced, Mason grudgingly signed your letter of agreement. Per the terms of the agreement, Mason did eventually pay all fees and costs of the project, but not without numerous courteous phone calls and reminders on your part.

Text screen: with VHS single image of expensive home; clipart of clock.

The project was allowed to progress at a normal pace, as Mason would not be using the residence for 8 months. Upon completion of the project, Mason was pleased.

Text screen: with VHS single image of Mason standing in imposing stance

Through your workings with Mason, however, you determined that he had rightfully earned his reputation as a demanding, cautious and even possibly suspicious man.

Text screen: with clip art of cash/dollar sign

Even with the stress Mason placed upon you, you were pleased you took the project. Not only did you have a pleased client who might provide you with future possible work, but you also benefited financially from such a luxurious project.

Text screen:

Your Challenge....

Text screen:

Mr. Mason has called your firm and wishes to discuss a new project...

VCR segment Scene 1:

MASON IN BUSINESS SUIT SITTING IN HIS OFFICE ON THE PHONE. PACKED SUITCASE WITH OVERCOAT DRAPED OVER IT SITTING ON A CHAIR IS VISIBLE IN THE BACKGROUND.

MASON DIALS AND WAITS FOR ANSWER.

Hello, this is Jim Mason. (PAUSES, LISTENING) Yes, it's nice to talk to you again too. I wanted to let you know that I spent last weekend at the retreat and was most impressed with your work. (PAUSE) Well, you deserve it. I am most interested in helping one with such talent as yours get off the ground. And actually, that's what I'm calling about. You and I worked so well together on the retreat that I've decided I've got another project for you. I think you would enjoy it. (PAUSE) Well, let me tell you a little bit about it and then we can decide when we can get together.

Text screen: VHS still image of a conference room

Mason tells you that he is in desperate and immediate need of having his 20' x 30' conference room remodeled. The space seats fifteen in a comfortable fashion.

VCR segment: MASON STILL AT DESK IN HIS OFFICE ON PHONE.

Now you know my tastes and you know that corporate image we've got to maintain here, so I'm sure you're going to a bangup job. I'm thinking of spending in the neighborhood of fifty thousand or so. (EMPHASIZES) (CLOSEUP) This has got to be done right. (PAUSE) (OFFHANDEDLY) Great, great.

SHOT SHEET:
Opening Text Through Scene I

CUTAWAYS FOR OPEN TEXT SEGMENT

___ CU Letter of agreement on desk: still

___ WS Conference Room: still

___ Conference Room: slow pan

___ Conference Room: medium pan

___ WS Still of House

___ WS Still of bedroom interior scene

SCENE I (pg. 3) : MASON IN BUSINESS SUIT AT DESK

___ WS of scene with Mason at desk, include suitcase and overcoat in scene.

ZOOM IN..... **NOTE: non-phone hand out of shot and watch is on that hand!!**

___ MWS Mason at desk (Master shot)

___ CU Mason at desk (shoot whole scene for edit purposes)

___ CU calendar with Mason's hand at date

___ CU watch, hand moves into and out of frame

WEBSITES FOR MORE MULTIMEDIA/VIDEO INFORMATION

This is a list of some of the websites that will provide you with resources and information relating to multimedia and video production.

http://www.hyperstand.com/	This is the address for NewMedia magazine which is dedicated to providing information about the various new media (including both hard and software for producing multimedia and video applications). At the website look for the "Stories Cited in NewMedia" for on-line material.
http://www.intel.com/	This address will give you information relating to Intel Pentium processors (the processors with the power and speed to do super multimedia work).
http://www.pinnaclemicro.com/	You'll learn about optical hard drives and rewritable Optical disks from Pinnacle Micro. These optical disks allow for tremendous amounts of storage (up to two hours of digital video) and boy, are they fast!!
http://www.macromedia.com/	You'll get lots of info on some of the more commonly used multimedia software(ie: Authorware, Director, Soundedit, etc.) at this website.
http://www.randomhouse.com/	This address will give you loads of info about books that Random House Publishes about multimedia applications. One book, Desktop Video Studio, is only $45.00 and comes with a CD-ROM, to boot!
http:/www.syllabus.com/	This address takes you to Syllabus magazine's website, a dynamite place to visit. Syllabus is a magazine specifically dedicated to technology for education. They have lots of articles about multimedia and video applications and even offer great workshops to learn more about it. A two thumbs up!! You can also get a free subscription to Syllabus. Visit the site or call 1-800-773-0670.